

GERANIUM PUSILLUM (GERANIACEAE): NEW TO TEXAS

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ABSTRACT

Geranium pusillum, a native of Eurasia, is reported as adventive in the state of Texas. It is documented from Denton County, in the north central part of the state.

KEY WORDS: *Geranium*, Geraniaceae, Texas, USA

Geranium is a genus of about 350 species of worldwide distribution, with 137 species occurring in the New World. Aedo (2012) reports that 30 species occur in the USA, 16 introduced.

The genus is poorly represented in Texas. Correll and Johnston (1970) treated six species but one of these, *G. lentum* Wooton and Standley, has been determined to be based upon a misdetermination (Aedo 2012, p. 69). Turner et al. (2003) mapped five species as occurring in the state: *G. carolinianum* L., *G. texanum* (Trelease) A. Heller, *G. caespitosum* E. James, *G. seemannii* Peyritsch, and *G. dissectum* L. (which is cited as introduced). In his study of the genus in the New World, Aedo includes these same five species as occurring in Texas but treats *G. seemannii* as *G. seemannii* subsp. *seemannii*, conspecific with *G. seemannii* subsp. *repens* (H.E. Moore) Aedo of southern Mexico and Central America.

A sixth species is added here to the Texas flora, with documentation of its occurrence.

***Geranium pusillum* L.** Texas. Denton Co.: 1.1 mi W of jct of Boss Range Rd. and Co. Rd. 407 on Co. Rd. 404, then N 6.0 mi from jct of Starder Ln. and Co. Rd. 407 on Starder Ln., 8 May 2012, J. Singhurst 19308 (BAYLU). Figure 1.

About 120 plants of *Geranium pusillum* were found in scattered bare spots among small patches of *Aegilops cylindrica* in clay-loam soils along a periodically maintained electrical transmission line right-of-way that bisects a high quality tallgrass prairie. Associated species included *Andropogon gerardii*, *Sorghastrum nutans*, *Salvia azurea*, *Delphinium virens*, *Liatris mucronata*, *Tridens muticus*, *Asclepias asperula*, *Carex microdonta*, *Sporobolus* sp., *Hymenopappus scabiosaeus*, *Camassia scilloides*, *Desmanthus illinoensis*, *Penstemon cobaea*, *Pedimelum* sp., *Echinacea atrorubens*, *Callirhoe Thelesperma filifolium*, *Stenaria nigricans*, and *Dalea multiflora*.



Figure. 1. *Geranium pusillum* L. (Singhurst 19308, BAYLU). Photo by Darrell Vodopich.

The following comments are largely based upon Aedo (2012), except as otherwise cited. *Geranium pusillum* is a native of Eurasia that has been introduced to Australia, North America, and South America (Argentina and Chile). In North America, the species is known from the northern two-thirds of the USA (Virginia–Tennessee west to California, north to southern Canada. It is an early introduction to the USA, being cited by Torrey (1826) in Pennsylvania. This persistence perhaps indicates that the species will become a permanent resident in the state. The distribution nearest to Texas is northwest Arkansas (Carroll and Madison counties) and northeast Oklahoma (Adair and Sequoyah counties).

Geranium pusillum is an annual characterized by having only five anther bearing stamens (Aedo 2012). All other species of *Geranium* known in Texas have ten stamens.

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LITERATURE CITED

- Aedo, C. 2012. Revision of *Geranium* (Geraniaceae) in the New World. Syst. Bot. Monogr. 95: 1–550.
- Correll, D.S. and M.C. Johnston. 1970. Manual of the Vascular Plants of Texas. Texas Research Foundation, Renner.
- Torrey, J. 1826. A Compendium of the Flora of the Northern and Middle States. Vol. 1. Stacy B. Collins, New York.
- Turner, B.L., H. Nichols, G. Denny, and O. Doron. 2003. Atlas of the Vascular Plants of Texas. Sida Bot. Misc. 24. Bot. Res. Inst. Texas, Fort Worth.